SPITFIRE 60

SPITFIRE 30

SPITFIRE 15

User Manual

ALESIS

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1 Introduction

Welcome!

Thank you for making the Alesis Spitfire a part of your setup. Since 1984, we've been designing and building creative tools for the audio community. We believe in our products, because we've heard the results that creative people like you have achieved with them. One of Alesis' goals is to make high-quality music equipment available to everyone, and this user manual is an important part of that. After all, there's no point in making equipment with all kinds of capabilities if no one explains how to use them. So, we try to write our manuals as carefully as we build our products.

For more effective service and product update notices, please register your Spitfire online at http://www.alesis.com/support/warranty.htm.

The goal of this manual is to get you the information you need as quickly as possible, with a minimum of hassle. We hope we've achieved that. If not, please drop us an email and give us your suggestions on how we could improve future editions of this manual.

We hope your investment will bring you many years of creative enjoyment and help you achieve your musical goals.

Sincerely,
The people of Alesis

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About the Spitfire

e service te gister e at com/ htm.

Our Spitfire guitar amplifiers are compact and light, but extremely powerful. Perfect for both practicing and performing onstage, all three Spitfire models are endowed with the same professional-quality amplification system and features that make this line of amplifiers unique. Just take a look:

Spitfire Key Features

- **Three models: Spitfire 15** (15W RMS and 8" speaker), **Spitfire 30** (30W RMS and 10" speaker) and **Spitfire 60** (60 W RMS and 12" speaker)
- **On-board stereo effect processor** with 9 effect modules that provide multiple selectable effects
- **80 preset effect patches** that you can fully edit, store and restore to the factory default settings
- **Over 40 different effects** with adjustable parameters and innumerable effect combinations
- **Built-in auto-chromatic tuner**
- **Bass and Treble control knobs** for direct EQing of the audio signal (Spitfire 60 only)
- **Drive knob** for direct control over the DRIVE parameter found in the effects processor (Spitfire 30 and Spitfire 60 only)
- **Speaker Output** for connecting to an external 8-ohm speaker
- **Stereo Link Output** for connecting to the input of a second amplifier for true stereo output
- **Input for an optional expression pedal** for controlling effect parameters
- **Input for optional footswitches** for changing user programs
- **Headphones jack** for quiet, private playing in stereo
- **AUX Input** for a CD player or other line-level device—play along to your favorite songs!

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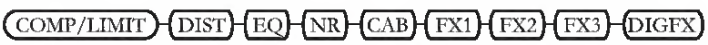
Spitfire Basics

Benefits of an On-Board Effect Processor

If you use guitar effects, you probably do so by linking pedals together into a chain or by using a multi-effect processor. All this extra equipment can cost a fortune and crowd your playing space. The Spitfire, however, simplifies things because it includes all the effects you need right in your amplifier. Instead of tripping over extra wires and turning knobs and pushing buttons on pedal after pedal, with the Spitfire you have full control over dozens of effects without the need for an external processor!

Effect Modules

If you were to think of the Spitfire's effect processor as a series of individual pedals linked together, then each pedal in that series would be considered an effect module. The Spitfire has nine separate effect modules, as shown below:



You can assign one effect to each of these modules and adjust its parameters accordingly. For more on the Spitfire's effect modules, see chapter 10.

Effect Types

When we use the word "effect" in this manual, we're usually referring to an effect type. Each module provides you with a selection of effect types, only one of which may be chosen for each module. For example, the DIST module allows you to select which type of distortion you want (ACOUSTIC, TUBE CLEAN, RHYTHM and others). The behavior of each of these effect types may be adjusted in one or more ways to produce variations of the effect.

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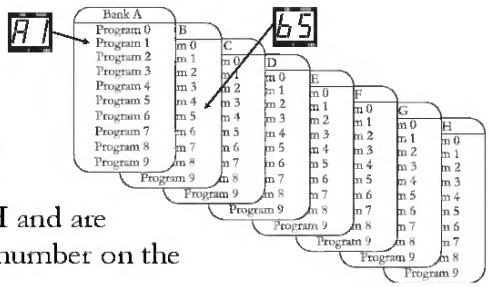
Parameters

A parameter is a control that changes the characteristics of an effect. When we use the word "parameter," we are referring to the "direct control" parameter available to the DIST, FX1, FX2 and FX3 modules. DIST's parameter is called DRIVE, and the parameters for FX1, FX2 and FX3 are labeled PARAM. The characteristic controlled by a parameter varies from effect to effect.

Programs

A program is a combination of effect modules and their respective settings. In PLAY mode, you have quick access to the Spitfire's eighty programs via the Program Up and Down buttons, optional footswitches and the VALUE knob. The programs are divided up into banks A – H and are identified by a bank letter and a program number on the display.



Playing in Stereo

The Spitfire outdoes most other guitar amplifiers by providing stereo output instead of the standard mono. We strongly encourage you to take advantage of the wonderful benefit this provides for your sound, because many of the Spitfire's excellent effects will sound even better when you listen to them in stereo. See chapter 9 for instructions on how to connect a second amplifier to the Spitfire using the STEREO LINK OUTPUT. If you don't have a second amplifier, you can immediately enjoy the stereo effects simply by listening with headphones.

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How to Use This Manual

This manual is divided into the following sections describing the various functions and applications for the Spitfire. While it's a good idea to read through the entire manual once carefully, if you already have general knowledge about guitar amplifiers and effects, you should use the table of contents to look up specific functions.

Helpful tips and advice are highlighted in a shaded box like this.

Chapter 2: Hookup Diagram shows you how to get the Spitfire connected and turned on.

Chapter 3: A Tour of the Spitfire describes all the controls and features of the unit. This chapter features labeled diagrams of the front and rear panels. The paragraphs that follow the diagrams provide more in-depth explanations of these features.

When something important appears in the manual, an exclamation mark (like the one shown at left) will appear with some explanatory text. This symbol indicates that this information is vital when operating the Spitfire.

Chapters 4 through 9 include step-by-step instructions for using the Spitfire, including how to select and edit programs, use the tuner function, store and copy programs, use the Defer Program Changes feature, and stereo-link two amplifiers.

Chapter 10: Effects Knob Settings explains the Spitfire's effect modules and types, as well as other settings controlled by the EFFECT and VALUE knobs.

Chapter 11: Troubleshooting can give you a hand if you're experiencing problems with the Spitfire. You'll find that most issues can be resolved simply and quickly.

Chapter 12: Specifications is full of information for the more technical users.

Chapter 13: Contact Information lets you know the best way to reach us if you have any questions or comments.

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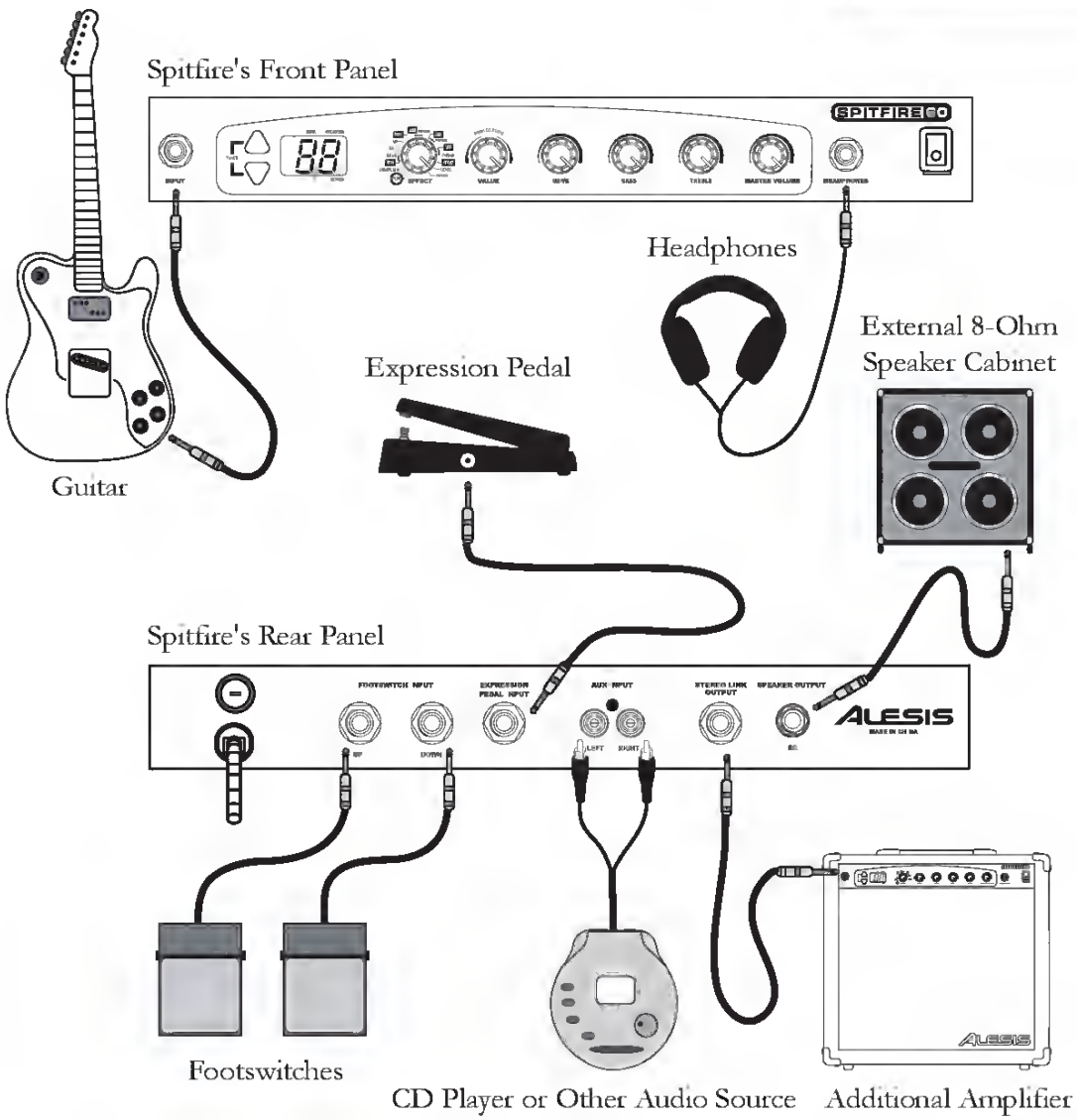
2 Hookup Diagram

The first thing we'll show you is how to get your Spitfire up and running. The following diagram shows you the most common method of hooking up your Spitfire, but you certainly aren't limited to the devices you see here. For example, you may want to connect a tape player to the AUX inputs instead of a CD player. And you can even use the Spitfire to amplify keyboards or other instruments.

Although you can experiment with different types of instruments, the Spitfire performs best with a guitar, as it was made specifically to handle that instrument's frequency range.



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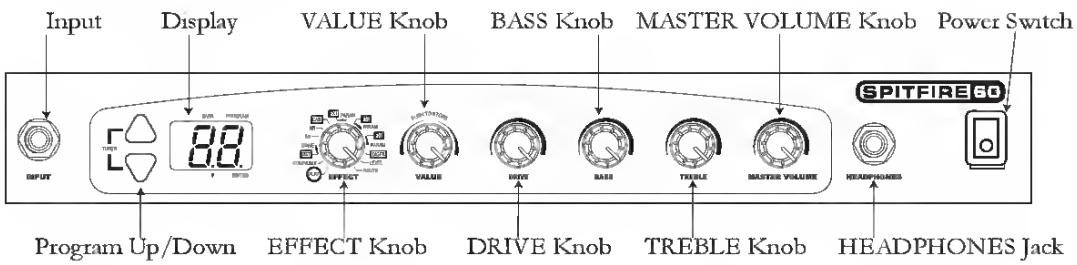
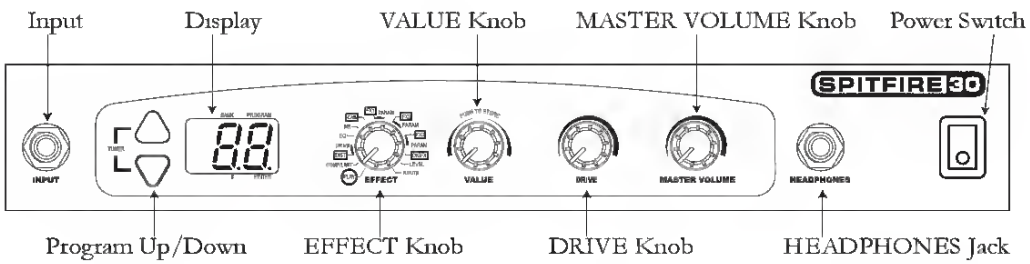
3 A Tour of the Spitfire

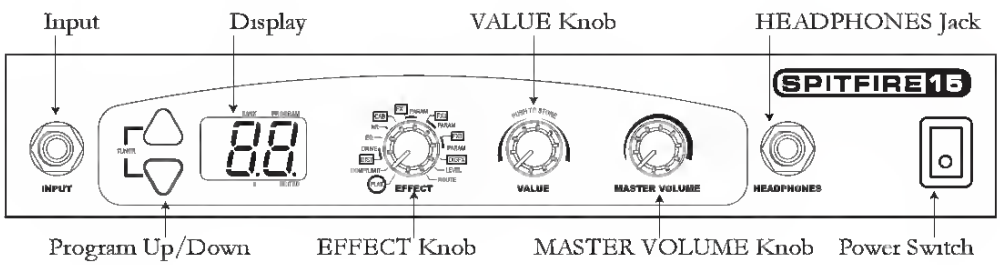
The diagrams in this section illustrate the features you'll find on the Spitfire's front and rear panels. The text that follows the diagrams explains those features.

Front Panel

Some of the front-panel features described here are not available on all Spitfire models. Refer to the diagram below to determine exactly which features are found on the model that you possess.







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Input

Plug in your guitar here using a guitar patch cord. You can also plug in another amplifier's line output in order to create a stereo link with that amplifier (refer to chapter 9 for details). You should use a 1/4" tip-sleeve (TS) cable.

Make sure the amplifier is turned off before you connect your guitar or any other instrument to the Spitfire.

Program Up/Down

While in PLAY mode, the Program Up button increments the program number, and the Program Down button decrements the program number. When you press both buttons together, the Spitfire goes into BYPASS mode, in which the audio signal from your guitar simply passes through the Spitfire without being affected. When you hold both buttons down for longer than half a second, the Spitfire goes into MUTE mode, in which no signal at all leaves the amplifier. When you are in BYPASS or MUTE mode, the tuner is activated.

You may use optional footswitches to perform the same functions as the Program Up and Down buttons. The Spitfire works with both normally open (NO) and normally closed (NC) footswitches.

Footswitches must be plugged in and not pressed when you turn on the Spitfire. Otherwise, the switches may not function properly.

Display

This LED display is made up of two digits and two decimal points. In PLAY mode the digits indicate the current bank letter and program number. When you turn the EFFECT knob to a module or parameter, the two digits display the setting of the selection. Descriptions of settings for each mode and parameter are in chapter 10.

The Display also contains two decimal points, each to the right of one of the digits. The # decimal point is used by the Spitfire's tuner to help indicate the pitch of a note you're playing, and the EDITED decimal point lights up when you have changed the settings of the current program. You can read more about these in chapter 5 "Editing Programs" and chapter 7, "Using the Tuner."

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EFFECT Knob

The EFFECT knob is used for selecting effect modules, parameters and other settings to edit. Around the knob, you'll see the names of sixteen different settings, including nine effect modules, four effect parameters (DRIVE and the three PARAMs) and two program-level settings (LEVEL and ROUTE). The PLAY setting is what you'll want to be in while playing your guitar through the Spitfire.

Refer to chapter 10 for descriptions of the possible values for the effect modules and parameters.

VALUE Knob

In PLAY mode, this knob lets you select a program. When you make a selection other than PLAY with the EFFECT knob, you are in edit mode, and the VALUE knob allows you to change the setting of the mode, parameter or global setting you have selected. Also, you can press this knob to store changes you have made to a program.

DRIVE Knob (Spitfire 60 and 30 only)

This knob gives you direct control of the DRIVE value, which is the parameter for the DIST module. Increasing the DRIVE value boosts the level of distortion and increases the loudness of the audio signal.

When an effect program is recalled, the DRIVE value is also recalled from that program regardless of the position of the DRIVE knob. But once you turn the DRIVE knob, the program will jump to the new DRIVE setting, and the program will be edited, which is evidenced by a lit EDITED decimal point on the display.

When you turn the DRIVE knob, the DRIVE value will appear on the display for a few seconds. You may also modify the DRIVE setting by turning the EFFECT knob to DRIVE and using the VALUE knob to change the amount of drive.

If you turn the DRIVE knob when the DIST module is turned off, the display will show "--" and the audio signal will not be affected.

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BASS Knob (Spitfire 60 only)

This knob gives you the ability to equalize (EQ) the low frequencies present in your guitar's audio signal. This setting is not related to the EQ module found on the EFFECT knob. Rather, it provides an additional means of controlling the bass frequencies.

When you turn the BASS knob, the amount of bass in the current program will increase or decrease accordingly, the EDITED light will turn on, and the display will briefly show the BASS setting. When you save a program, the current BASS value is saved with it so that it can be recalled later.

A program's BASS and TREBLE values will be lost if you switch programs without saving that program first. Be sure to save your programs!

TREBLE Knob (Spitfire 60 only)

This knob works the same way as the BASS knob, except that it controls the high frequencies of the audio signal.

MASTER VOLUME Knob

The MASTER VOLUME knob controls the overall volume of the audio signal that is output to the speaker, the HEADPHONES jack and the STEREO LINK OUTPUT on the rear panel. This value is not stored with a program.

You should turn the master volume all the way down before you turn on the amplifier. This will prevent any sudden pops that could damage the speaker.

Also, make sure the Power Switch is set to OFF before you connect your guitar or any other instrument to the Spitfire.

HEADPHONES Jack

Plug your headphones into this jack using a standard 1/4" stereo phone plug. If your headphones are 1/8", you can find a 1/8" to 1/4" adapter in most electronics stores. The internal speaker, STEREO LINK OUTPUT and SPEAKER OUTPUT are automatically disabled when you are using headphones.

To get a real-life miked-amplifier sound in your headphones, check out the effect processor's cabinet simulator effects (page 32).

Power Switch

Use this switch to turn the Spitfire on and off.

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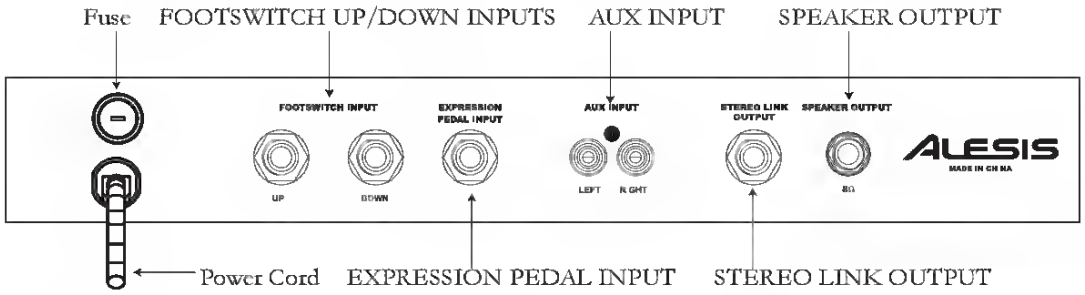
Rear Panel

All three Spitfire models offer the rear-panel features described here:



Fuse

The fuse protects the Spitfire from damage caused by a defective AC outlet. If this fuse blows, you must replace it.

CAUTION: Danger of fire or electrocution exists if the fuse is incorrectly replaced. Replace it only with the same or equivalent type of fuse recommended by the information found next to the fuse.

Power Cord

Plug the power cord into an AC outlet. The AC voltage required is fixed at a single voltage based on the country in which you purchased your Spitfire. The voltage is not switchable (i.e., 110/220) or universal (i.e., 90-240). Be sure to connect it to the proper voltage as indicated in the information found on the rear panel.

FOOTSWITCH UP/DOWN Inputs

Here you can plug in standard footswitches to use for incrementing and decrementing program numbers. The foot switches work in the same way as the Program Up and Program Down buttons. These jacks accept 1/4" plugs.

We recommend that you purchase footswitches to use with your Spitfire. They aren't very expensive, and they greatly streamline your interaction with the amplifier, particularly when playing live.

EXPRESSION PEDAL INPUT

This input is for an optional expression pedal, which gives you the ability to control effect parameters with your foot. All effects listed in chapter 10 that have "Pedal" in their names provide this capability. See chapter 10 for a complete list of parameters. This jack

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accepts a 1/4" plug. Expression pedals may be purchased at your local Alesis dealer.

AUX (Auxiliary) INPUT

The AUX INPUT allows you to play along with your favorite songs! Just connect this RCA input to the output from your CD player, tape player or some other external audio device. The AUX INPUT level is fixed, but you can use the external audio device's own volume control (for example, the headphone volume control on a portable CD player) to adjust the level of the signal coming into these jacks. When you turn the MASTER VOLUME knob, the level of this signal is affected as well.

STEREO LINK OUTPUT

To take full advantage of the on-board stereo effect processor, connect the STEREO LINK OUTPUT to the input of a second amplifier to create a true stereo setup. This jack accepts 1/4" TS cables.

See chapter 9 for detailed instructions on how to set up a stereo link between two amplifiers.

SPEAKER OUTPUT

You can use the SPEAKER OUTPUT to connect the Spitfire to an external 8-ohm speaker with a 1/4" TS cable. This will disconnect the internal speaker.

The SPEAKER OUTPUT is high-voltage and can easily damage normal recording, PA, and other line-level input stages, so do not connect this output to a recording device, a PA system, or the input of another Spitfire. Connect it only to an 8-ohm speaker.

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4 Selecting Programs

After you've plugged everything in, you'll probably want to check out the factory presets we programmed into the Spitfire. This chapter shows you how to do that.

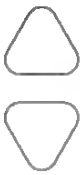
To Select Programs

1. Make sure the Spitfire is hooked up properly and turned on, as outlined in chapter 2.

2. Make sure you're in PLAY mode (turn the EFFECT knob to PLAY).

3. You can switch programs in three different ways:

   Program Up/Down buttons
   Use these buttons to increment and decrement the program number. You can hold down a button to increment or decrement programs continuously.



   VALUE knob
   You also can turn this knob to switch programs.

   Footswitches (not provided with the Spitfire)
   This is the easiest way to switch programs, especially while playing your guitar. Just plug footswitches into the FOOTSWITCH UP and DOWN inputs and step on them to increment and decrement the program number. You can hold down a footswitch to increment or decrement programs continuously.

4. Play your guitar to hear how the program affects the sound.

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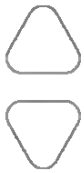
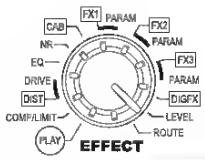
Editing Programs

To Edit a Selected Program



1. Select a program to edit using the Program Up and Down buttons, the VALUE knob or the optional footswitches.

2. Turn the EFFECT knob to the effect module or parameter you wish to modify.



3. Turn the VALUE knob to select an effect type or value for the module. As soon as you change the value, the EDITED decimal point on the display lights up to show you a change has been made to the current program.

4. If the module has a parameter such as DRIVE or PARAM, turn the EFFECT knob to select the parameter.

5. Using the VALUE knob, select a value for the parameter.

6. Continue in this way until you have completed assignments for all modules and parameters.

If you return all effects and parameters to their previous values, the EDITED light will go off.

See chapter 6 for instructions on how to store an edited program you'd like to save.

To toggle an effect module on and off, just press the Program Up and Program Down buttons together (or step on both footswitches) while the effect module is selected.

To Restore Factory Presets

Once you have saved changes to a preset program, you can still recall the original settings. To enter the RESTORE FACTORY PRESETS mode, simply hold down the VALUE knob as you turn the unit on and then select the program to be restored (or AL for all programs). Press the VALUE knob to confirm your selection. The display will blink rapidly several times to indicate the restore was successful. Any program changes you have made will be lost, so you might want to copy the program to another location first.

Just turn the EFFECT knob to exit the RESTORE FACTORY PRESETS mode, or turn the unit off and then on again.

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Storing & Copying Programs

To Store a Program

1. In PLAY or EDIT mode, press the VALUE knob. The display will flash the current program number.

2. Use the Program Up and Down buttons, VALUE knob or the optional footswitches to select the program number where the current program will be stored. If you want to save it in the same program number, you can skip this step.

3. Press the VALUE knob again to store the program in the selected place. The Spitfire then returns to the mode it was in before you began the store operation, and the destination program becomes the current program.

The store operation times out if you do nothing for more than five seconds. You also can abort the operation by turning the EFFECT knob to a different position.

To Copy a Program

To make a copy of an unedited program, select that program and then follow the steps outlined above to store it to a new location.

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Arranging Programs for Performance

You can use the copy function to arrange programs logically for easy recall during a performance. Take a typical song structure for example (intro, verse, refrain, etc.). For each part of the song, you may want to use a different effect program. To ensure uninterrupted performance, you can copy the programs used in the song into an order similar to the following example:

Program Number	Song Section
A0	Introduction
A1	Verse
A2	Refrain
A3	Verse
A4	Bridge
A5	Refrain

With an arrangement like this, you can just press the Program Up button or footswitch once to progress to each section of your song. Using the 80 available program locations, you can even arrange the programs conveniently for multiple songs in a set. For example, you can use programs A0-A5 for the first song, programs A6-B0 for the second song, and so on.

Another convenient way to switch programs during a performance is to enter deferred program-change mode, which is explained in chapter 8.

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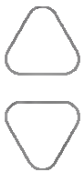
7 Using the Tuner

To Tune Your Guitar

1. In Play mode, enter BYPASS [bP] or MUTE [nE] mode by pressing the Program Up and Down buttons at the same time once (for BYPASS) or by holding them both down for more than half a second (for MUTE). The display will now show tuning information.



2. Make sure your guitar is connected to the Spitfire, and play the open string you wish to tune. The left digit of the display indicates the pitch nearest that of the open string. If the # decimal point is lit, the note is a sharp. If it is not lit, the note is a natural.

3. Look at the right digit of the display to determine if the pitch is correct. If the top four segments of the digit are rotating clockwise, then the pitch is higher than the pitch shown in the first digit. If the bottom four segments are rotating counterclockwise, the pitch is low. The more the pitch is off, the faster the rotation. If no pitch is detected, you'll see a dash in the left digit.

4. Tune the string until an 8 appears in the second digit, indicating that the string is in tune with the pitch displayed in the left digit.

   The visual guide on the next page shows what you'll see on the display while tuning your guitar.

Remember, the optional footswitches work the same way as the Program Up and Down buttons. Step on both footswitches once to enter BYPASS mode, and hold them down for more than half a second to enter MUTE mode.

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Visual Guide to Tuning

In tune

The bottom four segments rotate counterclockwise if pitch is low. The top four rotate clockwise if the pitch is high. An 8 means the string you have played is in tune with the displayed pitch.

= no pitch detected.

Here are the 12 possible pitches (a decimal point indicates a sharp):

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Changing Pitch Reference

If you turn the VALUE knob while using the tuner, the display shows you the setting for the Spitfire's pitch reference, which is set to 440Hz (shown as) for the A note above middle C. The possible range of values for this setting is 35 to 45, which represents 435Hz to 445Hz.

When you turn the Spitfire on and off again, the reference pitch is reset to 40.

While you are viewing or editing the pitch reference, the display will return to pitch indication if you do not rotate the knob for more than two seconds.

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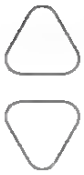
Deferred Program Change

When you switch programs, the Spitfire normally changes immediately to the program shown on the display. However, in some situations—especially when playing live—you may want the ability to scroll through program numbers while remaining in the current program setting. For example, let's say you're soloing in a program that gives you strong distortion and fat chorus. If you want to continue playing while you scroll up to a program that provides a clean rhythm sound, you'll have to be in deferred program-change mode.

See "Arranging Programs for Performance" in chapter 6 for an alternative to deferred program-change mode.

Enabling & Using Deferred Program Change

1. As you turn on the Spitfire, hold down one or both of the Program Up/Program Down buttons. Letters will scroll by on the display, spelling the word "deferred."



2. While in PLAY mode, use the Program Up or Program Down button or the VALUE knob to change the program number. The Spitfire will remain in the program it was in before you changed the program value. Also, the display will flash the digit that is different from the currently selected program. For example, if you are playing in program D5 and scroll up to program D7, the 7 will flash. If you scroll up to F2, both digits will flash.

You may also use the optional footswitches to change program numbers.

3. Once the display shows the program number you desire, press the Program Up and Down buttons together or step on both footswitches to confirm the program change. The display will stop flashing and the Spitfire will switch to the new program.

4. To return to normal program-change mode, turn off the Spitfire and turn it back on without holding down any buttons or footswitches.

Deferred program-change mode is especially useful when you're performing and want to switch easily between a rhythm setting and a lead setting as you continue playing.

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Stereo-Linking Two Amplifiers

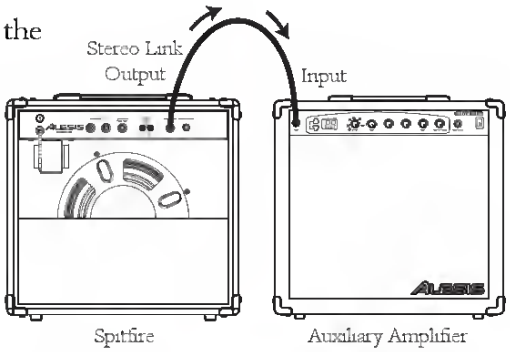
To take full advantage of the Spitfire's stereo capability, you can link it to another amplifier to create a true stereo setup. This section explains how to do that.

To Stereo-Link Two Amplifiers

1. Place the Spitfire and the auxiliary amplifier far enough apart to allow for a decent stereo spectrum. A few feet should be sufficient.

2. Make sure both amplifiers are turned off and that your guitar is connected to the Spitfire.

3. Using a 1/4" TS cable, connect the Spitfire's STEREO LINK OUTPUT to the input of the auxiliary amplifier.



4. Turn on the Spitfire amplifier first, and then turn on the auxiliary amplifier.

5. Play your guitar and adjust the volumes of both amplifiers until they are approximately equal. You may also want to adjust the tone of the auxiliary amp so that it matches the Spitfire's tone as much as possible.

6. Now you're playing in stereo! Experiment with the Spitfire's stereo effects to hear what a great difference two amplifiers can make. The best listening spot is a position that is between the amplifiers and equidistant from each, with both amplifiers facing you.

To see which effects are in stereo, refer to the descriptions in chapter 10.

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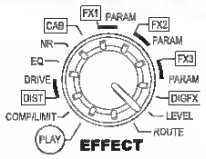
10 EFFECT Knob Settings

Following are descriptions of each of the effect modules (and other settings of the EFFECT knob), along with their effect types and parameters.



PLAY	
In this setting the display shows you the current program number. This is the mode in which you should be performing, as it allows you to easily switch programs via the foot pedals.	
A0→A9 b0→b9 C0→C9 d0→d9 E0→E9 F0→F9 G0→G9	Indicates the bank letter and program number of the current program.

COMP/LIMIT (Compressor/Limiter)	
Compression evens out the high and low volumes of your sound by squeezing them into a thinner range of levels, bringing down the high levels and boosting the low ones. Limiting controls only the high levels.	
C1→C9	Provide increasing levels of compression.
L1→L9	Provide increasing limiting.
OF	**Off** Turns COMP/LIMIT off.

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DIST (Distortion)

This setting adds that universal effect that was first used in rock music decades ago and now has become a staple for guitarists in many genres.

Ac	**Acoustic** Emulates the sound of an acoustic guitar.
tc	**Tube Clean** Simulates the clean sound of a classic tube amplifier.
ry	**Rhythm** A slightly distorted sound; great for rhythm playing.
Od	**Overdrive** Provides more grit than the Rhythm setting, like you're really pushing those amplifier tubes.
dt	**Distortion** Adds crunchiness to your sound.
bL	**Blues** A warm yet slightly crunchy sound associated with some of the blues-guitar greats.
FU	**Fuzz** That classic fuzz distortion effect of the 60s. Just listen and you'll see how it got the name.
Ld	**Lead** A searing overdrive that will make your solos scream.
Mt	**Metal** A heavily overdriven sound with a long sustain.
Sd	**Stack Drive** A heavy, driving distortion that sounds like you're playing through a massive tube stack amp.
Cd	**Combo Drive** Another heavyweight distortion; sounds like a tube stack amp with a well-defined midrange.
OF	**Off** Turns DIST off.

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DRIVE

This is a parameter of the DIST module.

1→99	Increasing levels of drive/gain for the DIST module.
Pd	Pedal control of the drive/gain.

EQ (Equalizer)

This setting gives you a 4-band equalizer that you can use to shape the sound of your audio signal by cutting and boosting certain frequencies.

1→50	Varying levels of cut and boost for low, middle and high audio frequencies broken down as follows: 01 – 10: attenuated highs and emphasized lows 11 – 20: less attenuation of highs and emphasis of lows 21 – 24: emphasized midrange 25: Flat EQ curve 26 – 30: emphasized highs 31 – 40: attenuated lows and emphasized highs 41 – 50: emphasized presence and lows
OF	**Off** Turns off the EQ.

NR (Noise Reduction)

This is a combination of two effects—hum elimination and noise reduction. Hum elimination works by cutting out the frequency that contains the hum (60Hz). Noise reduction works by gating the signal (muting the signal until its level rises above a certain point).

Hum Elimination (Left digit of display)

1→9	Increasing levels of hum elimination (60Hz harmonic notch filters).
0	Turns off hum elimination.

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Noise Reduction (Right digit of display)	
1→9	Increasing levels of gate threshold.
0	Turns off noise reduction.

CAB (Cabinet Simulator)

This module allows your Spitfire to emulate cabinet setups of various sizes.

C1	A single 12" driver cabinet.
C2	A 2 x 12" driver cabinet.
C3	A 4 x 10" driver cabinet.
OF	**Off** Turns off CAB.

FX1 (Multi-Effect Module 1, Mono to Stereo Effects)

This module gives you a choice of mono effects. You may assign one effect at a time to this module.

U0→U9	**Auto Wah** A wah sound controlled by playing intensity. Attack the strings aggressively for more effect. Higher values indicate higher input sensitivity.
UP	**Pedal-Controlled Wah** A wah sound controlled by moving the optional expression pedal up and down as you play.
h0→h9	**Phaser** An effect that shifts the phase of the signal and adds it to the original sound (in simpler terms, it adds a duplicate signal that is delayed a bit). The phaser gives your guitar a full, pulsating sound. Higher values result in more feedback, producing a more intense effect.

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hP	**Pedal-Controlled Phaser** A phaser effect with its feedback controlled by the expression pedal.
t0→t9	**Tremolo** Varies the volume of the signal, creating a rising and falling effect. Higher values result in greater depth of variation.
tP	**Pedal-Controlled Tremolo** A tremolo effect with its depth controlled by the expression pedal.
r0→r9	**Ring Modulation** An effect that modulates the amplitude of the signal, giving it a metallic sound. Higher values result in greater modulation depth.
rP	**Pedal-Controlled Ring Modulation** Ring modulation with its depth controlled by the expression pedal.
y0→y9	**Cry** Creates an effect similar to that of a voice box, adding a human-like crying effect to the sound. Higher values result in greater intensity.
yP	**Pedal-Controlled Cry** A cry effect with its filter frequency controlled by the expression pedal.
S0→S9	**Random Sample and Hold Step Filter** For this effect, the filter cutoff frequency changes abruptly to a new psuedo-random value at a fixed time interval, producing an arpeggiator-like sound.
SP	**Pedal-Controlled Step Filter** A step filter with its depth controlled by the expression pedal.
A0→A9	**Slow Attack** Reduces the attack rate of the signal, slowing the rate at which the volume of the sound rises when you attack a string. Higher values result in higher sensitivity.
n0→n9	**Auto Pan** Pans the signal back and forth from left to right at a constant rate determined by the PARAM setting. Higher values result in increased pan depth.

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F0→F9	**Flanger** Shifts the pitch of the signal up and down, creating a swirling effect. Higher values result in longer delay.
FP	**Pedal-Controlled Flanger** A flanger with its delay controlled by the expression pedal.
L0→L9	**Rotary Speaker** Emulates the sound of the classic rotary, creating a Doppler effect similar to that achieved by an organ's rotating speaker. Higher values result in greater intensity and pan depth.
LP	**Pedal-Controlled Rotary Speaker** A rotary speaker effect with its intensity and pan depth controlled by the expression pedal.
C0→C9	**Chorus** Adds fullness to your sound by emulating a chorus of multiple instruments. Higher values indicate greater modulation depth.
CP	**Pedal Chorus** A Chorus effect with its modulation depth controlled by the expression pedal.
P0→P9	**Pitch Transpose** Transposes the pitch of the signal either up or down. P0 – P4 transpose the pitch down a minor third, a major third, a perfect fourth and a perfect fifth respectively. P5 – P9 transpose the pitch up in the same manner.
PU	**Variable Pitch Transpose Up** Variably transposes the pitch upward from 0 to 2 octaves according to the setting of the direct-control parameter (PARAM) for FX1.
Pd	**Variable Pitch Transpose Down** Variably transposes the pitch downward from 0 to 2 octaves according to the setting of the direct-control parameter (PARAM) for FX1.
OF	**Off** Turns off FX1.

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PARAM (Direct-Control Parameter for FX1)

This parameter modifies the operation of the effect selected for the FX1 module. Changing between effect types with dissimilar value ranges will scale this value accordingly. For example, if you set Phaser to PARAM=63 and then switch to the Auto Wah effect, its PARAM value will be 12. Changing back to Phaser will result in a PARAM value of 63.

1→99	Indicates the value of FX1's direct-control parameter, according to the following: For Auto Wah, Phaser, Tremolo, Step Filter, Auto Pan, Flanger and Chorus, indicates the rate of the effect. For Ring Mod, indicates the rate of the modulation. For Slow Attack, indicates the rate of the attack. For Rotary Speaker, indicates the rate of the speaker rotation. For Pedal Pitch Transpose Up and Down, indicates the amount of pitch change in 1/4 semitones (from 1/4 semitone to more than 2 octaves). Wet/dry mix is fixed at 100% wet.
0→20	For Cry, indicates the sensitivity of the filter modulation. For Pitch Transpose with a fixed interval, denotes the wet/dry mix from 0 (100% dry) to 10 (50% wet, 50% dry) to 20 (100% wet).
Pd	Indicates that the expression pedal controls the parameter.
- -	Indicates that the effect assigned to the FX1 module does not have a direct-control parameter (like Pedal Wah) or that FX1 is off.

FX2 (Multi-Effect Module 2, Stereo Effects)

This module gives you a choice of stereo effects. These effects include all those found in FX1 except for Flanger, Rotary Speaker, Chorus and Pitch Transpose. FX2 also gives you the following additional effect.

90→99	**Auto Phaser** A phaser for which the delay is controlled by playing intensity.

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PARAM (Direct-Control Parameter for FX2)

These parameters work exactly the same way as the direct-control parameter for FX1, with the following addition.

1→99	For Auto Phaser, indicates the rate of the effect.

FX3 (Multi-Effect Module 3, Delay-Based Effects)

This module gives you a choice of delay-based effects. A delay is an echo of the original signal that can occur at varying frequency and time.

d0→d9	**Doubling** Doubles the signal with a slight delay, creating the effect of two instruments playing at once. Higher values indicate higher intensity.
dP	**Pedal Doubling** Doubling effect with its intensity controlled by the expression pedal.
G0→G9	**Ping Pong Delay** Creates a delay that bounces back and forth between the right and left sides of the stereo spectrum. Higher values indicate more feedback.
GP	**Pedal Ping Pong** Ping Pong Delay effect with its amount of feedback controlled by the expression pedal.
t0→t9	**Tape Delay** Emulates the retro tape-delay effect that was created by recording a signal to tape and playing it back as a delay. Higher values indicate more feedback.
tP	**Pedal Tape Delay** A Tape Delay effect with its feedback controlled by the expression pedal; great for singling out notes or sections to echo.
S0→S9	**Stereo Delay** A standard delay that occurs in stereo. Higher values indicate more feedback, producing a longer-repeating echo.

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SP	**Pedal Stereo Delay** A Stereo Delay effect for which the feedback level is controlled by the expression pedal.
E0→E9	**Echo** An echo for which higher values indicate a wetter signal and lower values indicate a drier signal.
EP	**Pedal Echo** An echo for which the wet/dry mix is controlled by the expression pedal.
h0→h9	**Hall Reverb** Simulates the effect of sound waves bouncing off of the walls of a concert hall. Higher values indicate a wetter mix.
hP	**Pedal Hall Reverb** A Hall Reverb effect for which the wet/dry mix is controlled by the expression pedal.
r0→r9	**Room Reverb** Simulates the effect of sound waves bouncing off of the walls of a room. Higher values indicate a wetter mix.
rP	**Pedal Room Reverb** A Room Reverb effect for which the wet/dry mix is controlled by the expression pedal.
u0→u9	**Reverse Reverb** Creates a backwards-playing reverb that you hear immediately before you hear the original signal, instead of after it. Higher values indicate a wetter mix.
uP	**Pedal Reverse Reverb** A Reverse Reverb effect with its wet/dry mix controlled by the expression pedal.
A0→A9	**Plate Reverb** Recreates the classic "plate reverb" sound achieved by using a metal plate. Higher values indicate a wetter mix.
AP	**Pedal Plate Reverb** A Plate Reverb effect with its wet/dry mix controlled by the expression pedal.

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C0→C9	**Chorus** – same as in FX1.
CP	**Pedal Chorus** – same as in FX1.
F0→F9	**Flanger** – same as in FX1.
FP	**Pedal-Controlled Flanger** – same as in FX1.
L0→L9	**Rotary Speaker** – same as in FX1.
LP	**Pedal-Controlled Rotary Speaker** – same as in FX1.
P0→P9	**Pitch Transpose** – same as in FX1.
PU	**Variable Pitch Transpose Up** – same as in FX1.
Pd	**Variable Pitch Transpose Down** – same as in FX1.
OF	**Off** Indicates FX3 is off.

PARAM (Direct-Control Parameter for FX3)

This direct-control parameter works in a similar fashion as the one for FX1.

1→99	For Doubling, Ping Pong, Tape Delay and Stereo Delay, indicates the length of the delay, up to one second for Tape Delay and up to half a second for the others. For Chorus, indicates the rate of the chorus. For Flanger, indicates the rate of the flanger. For Rotary Speaker, indicates the rate of the speaker rotation. For Pedal Pitch Transpose Up and Down, indicates the amount of pitch change in 1/4 semitones (from 1/4 semitone to more than 2 octaves). Wet/dry mix is fixed at 100% wet.
0→20	For all reverbs, higher values indicate a longer decay. For fixed-interval Pitch Transpose, indicates the wet/dry mix from 0 (100% dry) to 10 (50% dry, 50% wet) to 20 (100% wet).

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Pd	Indicates that the expression pedal controls the parameter.
- -	Indicates FX3 is off.

DIGFX (Digital Sampling Effects)

This effect module emulates the effect that different variations of digital sampling can have on an audio signal.

d0→d9	**Sample Rate Decimation** Lower values indicate lower decimation frequency (more decimation, more aliasing).
dP	**Pedal Sample Rate Decimation** A sample rate decimator effect controlled by the expression pedal.
b0→b9	**Bit Reduction** Higher values indicate lower resultant bit depth.
bP	**Pedal Bit Reduction** Bit Reduction effect controlled by the expression pedal.
OF	**Off** Indicates that DIGFX is off.

LEVEL

In this position, the display shows you the output level of the current program.

1→30	**Level** Indicates the program output level in 2dB steps, where 25 is unity gain (0dB). Unity gain is the point at which the level of the output is the same as the level of the input.
Pd	**Pedal-Controlled Level** Program level that is controlled by the expression pedal.

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ROUTE

In this position, the display indicates the current signal-routing order of the FX modules. This ordering can have a big effect on your sound, as each effect in the configuration feeds into the next. Whatever the configuration, the LEVEL setting always comes last in line.

0	This is the default order. COMP/LIMIT → DIST → EQ → NR → CAB → FX1 → FX2 → FX3 → DIGFX
1	This one is the default order with FX2 and FX3 swapped to put the delay effects in the middle of the modulation effects. COMP/LIMIT → DIST → EQ → NR → CAB → FX1 → FX3 → FX2 → DIGFX
2	This order places the cabinet simulator at the end, allowing it to emulate multiple effects pedals feeding into a cabinet. COMP/LIMIT → FX1 → FX2 → FX3 → DIGFX → DIST → EQ → NR → CAB
3	This one is order 2 with FX2 and FX3 swapped. COMP/LIMIT → FX1 → FX3 → FX2 → DIGFX → DIST → EQ → NR → CAB
4	This order is the default order with the compressor/limiter placed at the end, making this one ideal for recording. DIST → EQ → NR → CAB → FX1 → FX2 → FX3 → DIGFX → COMP/LIMIT
5	This one is order 4 with FX2 and FX3 swapped. DIST → EQ → NR → CAB → FX1 → FX3 → FX2 → DIGFX → COMP/LIMIT
6	This is the one to go for if you're recording and want to sound like you're running several effects pedals into a cabinet. FX1 → FX2 → FX3 → DIGFX → DIST → EQ → NR → CAB → COMP/LIMIT
7	This configuration is order 6 with FX2 and FX3 swapped. FX1 → FX3 → FX2 → DIGFX → DIST → EQ → NR → CAB → COMP/LIMIT

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11 Troubleshooting

Symptoms	Cause	Solution
Spitfire does not function (no display or audio).	Unit not plugged in.	Make sure the power cord is plugged into a proper AC outlet.
	Fuse is blown.	Replace fuse with one that matches the criteria listed on the rear panel.
Audio distorted, even in BYPASS.	Input level too high.	Reduce instrument output level.
	Output level too high.	Turn down master volume.
No sound, level low.	Incorrect input/output connections.	Refer to chapters 2 and 3 for details on which types of cords to use.
	Master volume or program level set too low.	Change setting.
Guitar too quiet compared to CD audio.	Incoming CD audio is too loud.	Reduce the output of the CD player.
	Program level is set too low.	Increase Program Level setting.
Stereo-linking not working.	Amplifiers are not connected properly.	Make sure Stereo Link Output is connected to input of auxiliary amplifier.
Amplifiers are stereo-linked but effects aren't in stereo.	A stereo effect isn't selected.	Make sure you are using a stereo effect and not mono.
Footswitches not functioning properly.	When the Spitfire was turned on, footswitches were not plugged in or footswitches were pressed.	Turn off amplifier, make sure footswitches are plugged in and not pressed, and then turn on amplifier.

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12 Specifications

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Output Power Rating

SpitFire 15:	15W RMS Mono in 8Ω
SpitFire 30:	30W RMS Mono in 8Ω
SpitFire 60:	60W RMS Mono in 8Ω

Internal Speaker Size/Power

SpitFire 15:	8" Driver / 18W RMS
SpitFire 30:	10" Driver / 34W RMS
SpitFire 60:	12" Driver / 70W RMS

Internal Speaker Sensitivity

SpitFire 15:	95dB/W/m
SpitFire 30:	98dB/W/m
SpitFire 60:	99dB/W/m

Internal Speaker Max Output

SpitFire 15:	105dBSPL @ 1m
SpitFire 30:	111dBSPL @ 1m
SpitFire 60:	115dBSPL @ 1m

Amplifier Specifications

Input Connector:	1/4" TS (Unbalanced Mono)
Input Impedance:	>500KΩ
Max Input Level:	2.0Vp
Frequency Response:	5Hz-34KHz
THD+N:	<0.15% at 1W
THD+N:	<3% at Rated Power

Speaker Output

Output Connector:	1/4" TS (Unbalanced)
Output Impedance:	0.1Ω
Max Output Level:	Rated Power into 8Ω
Speaker Impedance:	>8Ω

Heaphone Output

Output Connector:	1/4" TRS (Unbalanced Stereo)
Output Impedance:	2.2Ω
Max Output Level:	2.4Vp (100KΩ load)
Headphone Impedance:	>16Ω

Aux Input

Input Connectors:	RCA (Unbalanced Stereo)
Input Impedance:	100KΩ
Max Input Level:	2.0Vp

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Stereo Link Output

Output Connector:	1/4" TS (Unbalanced)
Output Impedance:	2.2Ω
Max Output Level:	2.4Vp (100KΩ load)
Destination Impedance:	>1KΩ

Expression Pedal Input

Intput Connector:	1/4" TRS (Balanced Mono)
Tip Output Level:	3.3VDC
Tip Output Impedance:	50KΩ-150KΩ
Ring Input Level:	1.6VDC-2.5VDC
Ring Input Impedance:	36KΩ
Sleeve Output Level:	1.6VDC (Reference Out)
Sleeve Output Impedance:	100Ω

FootSwitch Inputs

Connector:	1/4" TS (Unbalanced)
Impedance:	10KΩ
Accepted Switch Type:	Single-Pole, Single-Throw Normally Open or Normally Closed

Signal Processing Specifications

Sample Rate:	31.25KHz
Effect Modules:	8
Programs:	8 Banks x 10 Programs = 80
A/D Converter:	20-bit, 64x oversampling
D/A Converter:	20-bit, 128x oversampling

A/C Power Requirements (Refer to the Rear Panel)

SpitFire 15:	25W - 120VAC~ or 230VAC~
SpitFire 30:	45W - 120/230VAC~
SpitFire 60:	90W - 120VAC~ or 230VAC~

Mechanicals

SpitFire 15:	14.25" x 13.25" x 7.15" / 360mm x 335mm x 180mm, 17.0lb/7.7kg
SpitFire 30:	16.25" x 15.25" x 8.15" / 415mm x 385mm x 205mm, 24.0lb/10.9kg
SpitFire 60:	18.40" x 17.50" x 9.40" / 465mm x 445mm x 240mm, 32.0lb/14.5kg

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13 Contact Information

Alesis Distribution, LLC
Los Angeles, USA

E-mail: support@alesis.com
Website: http://www.alesis.com

Spitfire User Manual
Version 1.0 by Edwin Erdmann

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